

BellSouth Corporation  
Suite 900  
1133-21st Street, NW  
Washington, DC 20036-3351

glenn.reynolds@bellsouth.com

Glenn T. Reynolds  
Vice President -  
Federal Regulatory

202 463 4112  
Fax 202 463 4142

September 11, 2003

**EX PARTE**

Ms. Marlene H. Dortch  
Secretary  
Federal Communications Commission  
The Portals  
445 12<sup>th</sup> St. SW  
Washington, D.C. 20554

Re: **CC Docket 01-338**

Dear Ms. Dortch:

This is to notify you that on September 10, 2003, BellSouth met with Christopher Libertelli, Senior Legal Advisor to Chairman Powell, to discuss the Commissioner's recently-adopted rules concerning Fiber-to-the-Home deployment. Representing BellSouth at the meeting were Fred McCullum, Jon Banks, Kathie Levitz and the undersigned. In this meeting, BellSouth raised concerns about the definition adopted in the Triennial Review Order. The attached documents were distributed at this meeting.

Pursuant to Commission rules, please include this notice and attachments in the record of the proceeding identified above.

Sincerely,



Glenn Reynolds

cc: Chris Libertelli

Enclosure

FCC MAIL ROOM

Before the  
Federal Communications Commission  
Washington, D.C. 20554

DEC 28 8 33 AM '01

In the Matter of	)	
	)	
Review of the Section 251 Unbundling	)	
Obligations of Incumbent Local Exchange	)	CC Docket No. 01-338 ✓
Carriers	)	
	)	
Implementation of the Local Competition	)	
Provisions of the Telecommunications Act of	)	CC Docket No. 96-98
1996	)	
	)	
Deployment of Wireline Services Offering	)	CC Docket No. 98-147
Advanced Telecommunications Capability	)	
	)	

## NOTICE OF PROPOSED RULEMAKING

Adopted: December 12, 2001

Released: December 20, 2001

Comment Date: 60 days after Federal Register publication of this Notice

Reply Comment Date: 105 days after Federal Register publication of this Notice

By the Commission: Chairman Powell, Commissioners Copps and Martin issuing separate statements.

## TABLE OF CONTENTS

	Paragraph
I. INTRODUCTION.....	1
II. BACKGROUND.....	5
III. FRAMEWORK FOR UNBUNDLING.....	15
A. THRESHOLD STATUTORY ANALYSIS.....	18
B. "AT A MINIMUM" STATUTORY ANALYSIS.....	21
1. Encouraging Facilities Investment and Broadband Deployment.....	22
2. Other Statutory Considerations.....	31
C. MORE GRANULAR STATUTORY ANALYSIS.....	34
1. Service- and Location-Specific Considerations.....	36
2. Facility and Capacity Considerations.....	41
3. Customer and Business Considerations.....	42
4. Triggers for Changes in UNE Availability.....	45

access they provide to the incumbent LEC's network. If so, should we consider the replacement of these existing network elements with a single "unified" loop network element? Would doing so require that we explicitly incorporate the functionality of additional equipment, such as packet switching, splitters or other passive devices into the definition of the loop?<sup>112</sup> Alternatively, should we define such a "unified" loop as a particular level of bandwidth between a point in the incumbent LEC's network and a specific end user? Should our loop definition take into consideration and distinguish between various levels of bandwidth and quality of service (e.g., constant bit rate, variable bit rate<sup>113</sup>)? How would any such changes to the loop definition impact the Act's goal of ensuring the deployment of broadband capabilities and encouraging investment in facilities?

50. As discussed above, we also seek comment on how we should treat deployment of new facilities by incumbent LECs for the purposes of our loop unbundling requirements.<sup>114</sup> Should we apply the same requirements to all transmission facilities or should we distinguish between copper, fiber and wireless facilities? Should we adopt unbundling requirements specific to the unique characteristics of the underlying facilities? For example, the transmission capacity of fiber optic facilities is significantly larger than a standard copper loop. Should our rules treat different local exchange network architectures differently? For example, should we distinguish between the deployment of fiber optic facilities directly to the home (i.e., "fiber to the curb") and fiber optic facilities only to remote terminals? Should we treat all loop facilities the same or should we distinguish between existing facilities and new construction? Should we adopt different rules for new "overlay" facilities that duplicate existing facilities than for new deployment that completely replaces old facilities? In other words, should we consider whether the incumbent LEC has multiple alternative facilities in place to serve a specific customer in determining what, if any, facilities the incumbent must provide on an unbundled basis? To what extent can requesting carriers use older facilities, such as spare copper plant, after an incumbent LEC has deployed "overlay" network facilities? What operational issues are created by such overlapping facilities? For example, are there additional spectrum management or interference problems (i.e., "cross-talk") associated with the simultaneous deployment of packet-switched services over older copper facilities and new fiber optic facilities?

51. We also seek comment generally on how we should apply the more granular unbundling analysis we seek to develop in this proceeding. Should we, as described above, apply service, geographic, capacity or other distinctions to the unbundled loop? If we were to limit access to unbundled loops to specific geographic areas what type of data should we review to make such a determination? Should we distinguish unbundling obligations by the services

<sup>112</sup> The Commission has previously requested comment on whether attached electronics used for both voice and data services, such as the splitter, should be included in the definition of the loop. *Fifth Further Notice of Proposed Rulemaking*, 15 FCC Rcd. at 17858, para. 122. The Commission has also indicated that the splitter might be considered part of the packet switching network element discussed below. See *Application by SBC Communications Inc., Southwestern Bell Tel. Co. and Southwestern Bell Communications Servs., Inc. d/b/a Southwestern Bell Long Distance Pursuant to Section 271 of the Telecommunications Act of 1996 To Provide In-Region, InterLATA Services In Texas*, Memorandum Opinion and Order, 15 FCC Rcd 18354, 18517, para. 328 (2000).

<sup>113</sup> Constant Bit Rate (CBR) refers to a service where information (i.e., data) is conveyed regularly in time and at a constant rate. Variable Bit Rate (VBR) refers a service in which information is allowed to vary within defined limits. Harry Newton, *Newton's Telecom Dictionary* 210, 918 (16<sup>th</sup> ed. 2000).

<sup>114</sup> See *supra* para. 24.

**Timothy J. Regan**  
Senior Vice President  
Government Affairs

**Corning Incorporated**  
1350 I Street NW  
Suite 500  
Washington, DC 20005

t 202 682 3140  
f 202 682 3130

[regantj@corning.com](mailto:regantj@corning.com)  
[www.corning.com](http://www.corning.com)

May 5, 2003

Ms. Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street SW  
Washington, DC 20554

**Re: *Ex Parte* Letter in CC Docket No. 01-338  
Review of the Section 251 Unbundling Obligations of  
Incumbent Local Exchange Carriers**

**CORNING**  
Discovering Beyond Imagination

Dear Ms. Dortch:

In reference to the above captioned docket (CC Docket No. 01-338), I was invited by Emily Willeford, Special Assistant to Commissioner Martin, to submit the attached information on definitions for dark fiber, fiber-to-the-home, and other fiber-related topics.

In accordance with Commission rules, I am filing a copy of this document with this notice and request that the document be included in the record of the proceeding identified above.

Respectfully submitted,



Attachment

CC: Chairman Michael K. Powell  
Commissioner Kathleen Q. Abernathy  
Commissioner Jonathan S. Adelstein  
Commissioner Michael J. Copps  
Commissioner Kevin J. Martin

## Key Definitions

### Dark/Dead Fiber

In the Final Order of the UNE Triennial Review, the FCC should not change the current definition of dark fiber provided for in paragraph 174 of the *Local Competition Third Order and Report* (15 FCC Red 3696). The language in the Order should state:

(i) *Dark Fiber.* Dark fiber is defined as an end-to-end fiber that has not been activated through connection to the electronics that “light” it, and thereby render it capable of carrying communications services. Because it is in place and easily called into service, dark fiber is analogous to “dead count” or “vacant” copper wire that is connected end-to-end and carriers keep dormant but ready for service<sup>1</sup>.

In addition, a definition should be included in the Final Order for dead fiber as follows:

(ii) *Dead Fiber.* Dead fiber is defined as fiber that is not continuously connected end-to-end at fiber distribution frames or opto-electronic devices and is, therefore, not in place and easily called into service. Dead fiber is not subject to unbundling under section 251 (c)(3) of the Act.

### FTTH Definitions

The language for the Final Order will give effect to the FCC’s February 20 decision regarding FTTH. This proposed language for the Order is designed to give the maximum level of regulatory incentive for ILECs to invest in FTTH within the bounds of the FCC’s decision.

(a) *New build/greenfield FTTH loop obligation.* An incumbent LEC shall not be required to provide access, in accordance with section 251 (c)(3) of the Act, to the new build/greenfield FTTH loop.

(b) *Overbuild/brownfield FTTH loop obligation.* An incumbent LEC shall not be required to provide access, in accordance with section 251 (c)(3) of the Act, to the overbuild/brownfield FTTH loop for the provision of broadband service. Where an overbuild/brownfield FTTH loop is deployed, an incumbent must, at its sole discretion, either maintain the existing copper loop and provide access to it under section 251 (c)(3), or if the existing copper loop is retired, provide such access to the overbuild/brownfield FTTH loop for the provision of narrowband service.

---

<sup>1</sup> *Local Competition Third Order and Report*, 15 FCC Red 3996, para. 174 (1999).

(1) *Fiber to the Home (FTTH) loop*. A FTTH loop is defined as a transmission facility that consists of a continuous fiber optic connection and/or transmission path between a distribution frame (or its equivalent) in the incumbent LEC central office and the loop demarcation point and/or serving terminal at the mass market end-user customer premise. The FTTH loop includes all the features, functions, and capabilities of such a transmission facility.

(2) *Greenfield*. A “greenfield” situation exists where an ILEC must deploy FTTH loop to meet retail service demands where no ILEC facilities already exist to meet such service demands. Greenfield situations would include, *inter alia*, the following:

- (i) New subdivisions and developments;
- (ii) Additional phases of new construction in existing developments;
- (iii) New construction to serve a specific location in an existing serving area;
- (iv) New land use requiring the complete removal of existing facilities such as changing use of a building from business to residential or from single occupancy to multiple occupancy, or demolishing an existing structure and constructing a new structure;
- (v) Major additions and re-arrangements to a location resulting from, but not limited to, acts of God requiring major replacement of existing facilities or conversion of existing developments to a new use (e.g., urban renewal); and
- (vi) Existing locations where other providers have facilities in place, and where the incumbent LEC subsequently must deploy new facilities to meet its provider of last resort obligations.

(3) *New build/greenfield FTTH loop*. A new build/greenfield FTTH loop is defined as a FTTH loop deployed in a “greenfield” situation.

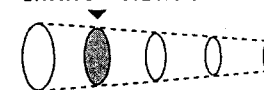
(4) *Overbuild/brownfield FTTH loop*. An overbuild/brownfield FTTH loop is defined as a FTTH loop deployed to serve an end-user customer that is currently being served by the incumbent LEC over existing facilities in what are not “greenfield” situations.

(5) *Narrowband service*. Narrowband service is defined as a transmission facility that transmits no more than 64 kilobits per second.

(6) *Broadband service*. Broadband service is defined as a transmission facility that transmits in excess of 64 kilobits per second.

(7) *Enterprise market.* An end-user customer served by 24 or more voice circuits.

(8) *Mass market end-user customer premise.* A mass market end-user customer premise is defined as any building used by an end-user customer who is not in the "enterprise market."



## Unclear Broadband Dereg in FCC Triennial Undermines Fiber Deployment ROI (Part II: Wireline Dismal Future Series)

**Summary:** After a detailed analysis of the Triennial order provisions affecting broadband and fiber/packet deployment, Precursor believes **the order is effectively not meaningful deregulation for broadband and is unlikely to result in the Bells ramping capex significantly to deploy new broadband or fiber networks.** We remain **only marginally positive on fiber/packet suppliers GLW and AFCI.** We still expect the mix of Bell capex to shift from copper to fiber/packet spending, but due to competitive and operational reasons, not because of the meager deregulation in this order. VZ may still begin to upgrade its network with Fiber to the Home (FTTH), albeit less ambitiously. Nonetheless, it is challenging enough for a Bell to reach an acceptable ROI on large scale fiber deployments based on competitive, economic, and cost assumptions *without* large regulatory uncertainty. **This order is overflowing with broadband and fiber investment uncertainty and risk.**

**Why the Order Makes ROI So Uncertain and Risky.** (1) **FCC created unclear definitions.** Does Fiber to the Home (FTTH) exclude small or home office businesses? The definition, the most important provision for investors, was left surprisingly unclear. The language in the rule, which is the legally operative language, says Fiber to the Home overbuilds are not unbundled for broadband to "a residential

unit." The rule does not mention the mass market or Fiber to the Premises, (FTTP). This is a potentially huge restriction since neighborhood builds involve residential "homes," home offices, and "mass market" small businesses. If the FCC truly means "home" and not "premises" or "mass market," the deregulation applies to a much smaller and less lucrative target market, seriously undermining the economics necessary for a good ROI. (2) **The FCC deregulated much less than it signaled.** (A) Hybrid networks potentially still allow broadband access. FTTH new builds are completely deregulated, and FTTH overbuilds are mostly deregulated, except narrowband access. This is practically relevant for only a fraction of the Bell plant. However, hybrid loops, which represent most of the Bell network, are open to both narrowband and non packet/circuit broadband access. A Bell gets the benefit of not having to unbundle the packet portion of its hybrid network. However, the Bell still has to provide access to broadband time division multiplexing (TDM) technology, such as DS1 or DS3 capacity, assuming a finding of impairment. This means competitors can largely use Bell facilities, rather than their own, as the underlying high capacity pipe for comparable broadband services. Furthermore, the language is unclear, but the rules *may* allow competitors to ask (and pay for) the ILECs to upgrade their facilities to provide such capacity.

(B) No help for the most expensive part of the build. *By far*, the most expensive and capital inefficient part of a fiber deployment is the segment from the curb/property line to the home because it serves only one customer, and distances can be a few feet or a thousand plus feet. Thus, a hybrid fiber-copper loop may be the Bells' optimal end-game for broadband, or may be an intermediate step toward a full FTTH overbuild. By only allowing full deregulation of FTTH and not fully deregulating fiber to the curb/property line, the FCC *vastly reduced* the economic value of the deregulation. (C) Enterprise got little deregulation. Only the fattest broadband pipes (OCn) do not have to be unbundled. The Bells must continue to unbundle DS1, DS3, and dark fiber loops in the enterprise market. Furthermore, the rules on access to Enhanced Extended Links (EELs) got more favorable to competition. These requirements may discourage fiber investment in the enterprise market. (3) **FCC has too many costly strings attached.** Many incorrectly assume there is a quid pro quo in the order that if a Bell deploys broadband, it can get deregulation. While it may look that way on the surface, on closer examination, the FCC has many strings attached to that deregulation. String #1: If a Bell overbuilds all the way to the home, it must maintain its old copper plant, or it must provide a narrowband channel on the new network, requiring additional OSS costs. String #2: The FCC

did not preempt the states from complicating the retirement of an overbuilt copper loop. String #3: The FCC amended its rules to allow competitors to protest retirement of overbuilt copper. String #4: Even if there is a finding of no impairment and no unbundling required under section 251, it appears the FCC has maintained the ability to require wholesale access under section 271. String #5: The FCC defined network elements in such a way as to potentially open broadband facilities to a future finding of impairment and competitive access, even if the element is not being used for telecom services. (4) **Process remains highly uncertain.** (A) What you see is not necessarily what you get. In February, the FCC officially voted to end line sharing, which helped give the Bells the impetus to cut DSL prices to differentiate from CLECs' bundles. However, the biggest surprise and reversal in this order, was that not only did line sharing not end, it was reincarnated as "line splitting." This *massive regulatory whipsaw* has to chasten a Bell from trusting the FCC on any deregulation provision in this order. (B) The broadband deregulation could be vulnerable in court. This order clearly picks broadband technology winners and losers, which is likely contrary to the Telecom Act which defined "advance telecommunications capability...without regard to any transmission media or technology," which is exactly what the FCC did in this order.\*\*





## Unstable Regulatory Building Blocks Undermine Fiber to the Home Return on Investment

### The Process Remains Highly Uncertain

Regulatory process has proven unreliable, e.g. line sharing and enterprise switching carve out. Furthermore, the order is at risk of being overturned by a court

### The FCC Has Too Many Costly Strings Attached

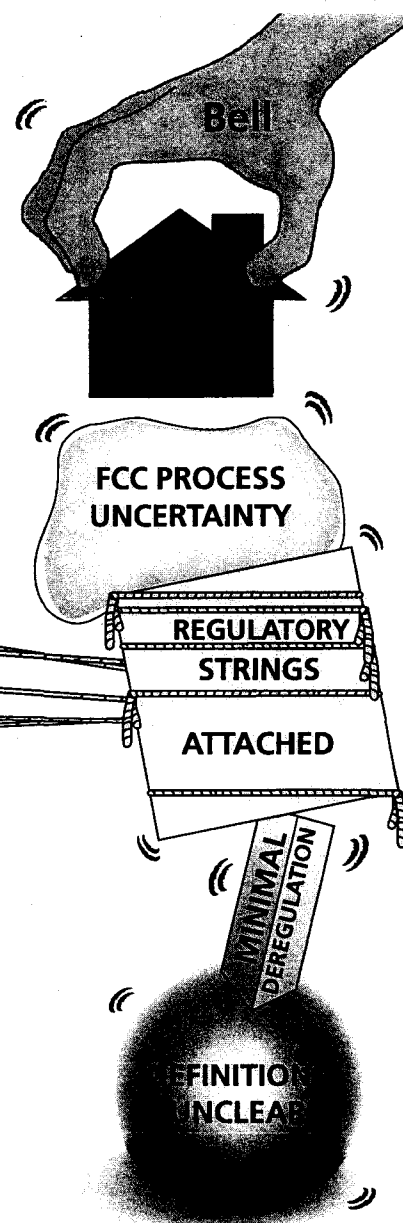
- String 1: Maintaining competitive access
- String 2: State involvement in copper retirement
- String 3: Amended protest rules in copper retirement
- String 4: Potential 271 requirements
- String 5: Network element definition

### The FCC Deregulated Much Less Than It Signaled

Hybrid networks (FTTC or to remote terminal) still open to both narrowband and nonpacket/circuit broadband access

### The FCC Created Unclear Definitions

Does Fiber to the "Home" (FTTH) exclude small or home office businesses?



# fulcrum

GLOBAL PARTNERS™



## Wireline Communications: We Believe the Industry is Sick— Regulation is Making it Sicker

Gregory P. Miller (212) 803-9024  
Chris Chapple (212) 803-7016

[gmiller@fulcrumgp.com](mailto:gmillers@fulcrumgp.com)  
[cchapple@fulcrumgp.com](mailto:cchapple@fulcrumgp.com)

May 16, 2003

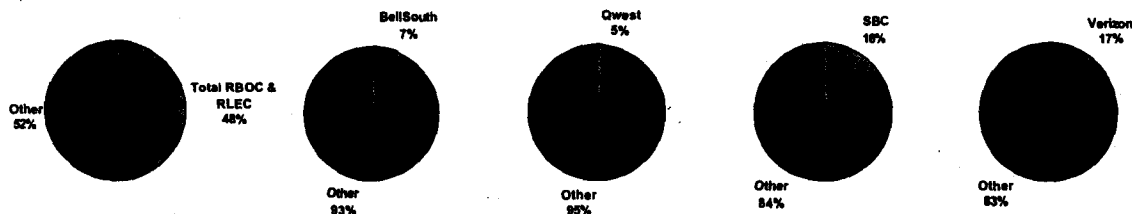
AT&T Corp. (T, \$17.44, NYSE, SELL)  
BellSouth Corp. (BLS, \$26.78, NYSE, NEUTRAL)  
Qwest Comm. (Q, \$4.45, NYSE, NEUTRAL)  
SBC Comm. (SBC, \$24.76, NYSE, NEUTRAL)  
Sprint Corp. (FON, \$11.73, NYSE, NEUTRAL)  
Verizon Comm. (VZ, \$37.10, NYSE, NEUTRAL)

---

### Decision points:

- As we begin to debate the outcome of the details on the FCC's long-awaited final order on competition, we thought we would provide investors and industry participants with our thoughts on what we believe is required for the order to affect a change for the local telecom industry.
- When the long-awaited final details are released, we would expect the outcome to be marginally better for the local industry than previously anticipated. Otherwise, the RBOCs will likely seek that same judicial action that remanded the order, which was the basis of the current order, back to the FCC. Because the merits of the case remain virtually unchanged, so too will the outcome, in our opinion.
- We believe there will be structural incentives in place that will allow the RBOCs to eliminate the potential for UNE-P resale, as they build out more advanced broadband networks.
- We believe both state and federal regulators should be considering more than strict local market-share tests when evaluating just how competitive the local access market is. Competing technologies such as cable modems, cable telephony and the highly competitive wireless services have an increasingly damaging impact on the RBOCs that has not been formally recognized by regulators.
- If the FCC decides to hold hearings later this summer, as it has suggested, and changes the details of TELRIC, the very basis of the pricing structure of UNE-P resale that was clearly created in a vacuum, this entire exercise the FCC and the states are conducting could be a complete waste of time.
- With what we believe will be a more positive outcome than what we witnessed in the preliminary details more than a month ago, we would expect the stocks to maintain some of the recent positive momentum as we have witnessed as of late.
- However, when the second quarter is reported for these companies and it becomes more clear that the recent changes in pricing (all-you-can-eat services) will have an adverse impact on the companies' financials, starting as early as the third and fourth quarters, we believe the stocks will likely retreat from recent highs.

**Charts 1-5. "True" marketshare of communications access points (including only access lines and DSL subscribers)**



*Note: Total RBOC and RLEC includes total access lines, excluding UNE-P and resale lines, and includes DSL subscribers. "Other" includes US industry wireless subscribers, UNE-P and resale access lines, cable modem and cable telephony subscribers.*

*Source: Company data and Fulcrum Global Partners LLC estimates.*

**So what do we look for?** What we are expecting to evolve from the upcoming order is some sort of incentive based mechanism to entice the local exchange carriers to continue investing in their networks without eliminating the only viable form of competition in the marketplace (real or artificial competition). Even though we have recently received a great number of questions in this regard, it is still far too early to predict the most likely form of these incentives. The preliminary order hinted to the idea that if the RBOCs deployed additional capital in the form of fiber to the home projects, then they may not be required to also make available some form of a 64 kbps channel to potential resellers at deeply discounted prices. In this case, even though we would not expect the companies to deploy fiber all of the way to the home, we could expect that if the incentive is there for the RBOCs to begin to deploy fiber much closer to the home than ever before such that provisioning of 100mbps of capacity is possible. If the RBOCs no longer have to be concerned with stranded investments due to UNE-P resale of a small fraction of that capacity, then there does not exist the risk that would cause the companies to hold off on investing in such a network. Therefore, we believe that in order to stimulate investment on the part of the RBOC, one of the FCC's primary goals, and in order to generate an even greater level of broadband deployment (one of the primary goals of the RBOCs), then the FCC, in cooperation with the respective state PUCs must create such a framework that does not entail the onerous deployment of fiber capacity all the way to the home in order to be exempt from UNE-P based resale. In fact, it could easily be argued that it would be fair to exclude all fiber optic capacity from resale at UNE-P rates.

**What is Fiber to the Home?** – The tone of the preliminary order would lead us to believe that the FCC will ultimately relax the associated restrictions on fiber builds to the home. The question remains, however, what exactly does the FCC mean when they say fiber to the home? Will the carriers be required to directly connect end-to-end fiber optic circuits that have no copper whatsoever in the circuit loop? Will it be sufficient for the carriers to deploy the fiber deeper into the network such that they could deliver 100 mbps to any given home? The latter would surely act as an incentive to spend incremental billions while the former would not likely do it. The incremental cost of fiber stretched every inch of the way to the home would likely be too cost prohibitive to embark upon such a massive scale. We estimate that of the total 155 million RBOC access lines in service today, half of which are residential, less than 5% are currently connected with fiber to the home. Clearly we have a long way to go in reaching the FCC's objective of ubiquitous broadband penetration.

**What could stop it?** – It is true that an opportunity does exist for the FCC to further its goal of near ubiquitous broadband deployment in the coming years by offering incentives for the RBOCs to deploy the necessary capital to do it. One such incentive would be to allow the carrier to retire the copper loops that extend to the customer and subsequently not offer UNE-P based resale to